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**THE ENGLISH ENERGY CONSERVATION AUTHORITIES ISSUED PURSUANT TO  
THE HOME ENERGY CONSERVATION ACT 1995:**

**FURTHER REPORT for OXFORD CITY COUNCIL**

**31 MARCH 2013**

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## INTRODUCTION

### BACKGROUND

Under the Home Energy Conservation Act 1995, local authorities were required to consider measures to improve the energy efficiency of all residential accommodation in their areas, although they are not required to implement any measures. This traditionally included a number of energy efficiency promotions or measures such as cavity wall and loft insulation, and small scale renewables. These and their estimated carbon emissions savings were summarised in a yearly report (see Appendix I which details the wording of the Act).

It was expected that the Act would result in a 30% improvement in domestic energy efficiency between 1996 and 2010. From April 1996 to 31 March 2006, an overall improvement in domestic energy efficiency of the housing in local authority area was reported of only approximately 19.26% against a 1996 baseline.<sup>1</sup> Oxford met the 30% target in March 2008, saving approximately 106,000 tonnes of CO<sub>2</sub>. There has been no requirement for the Council to report on HECA from 2008 until this year.

The new reporting requirement in 2013, under the revived HECA, recognises local authorities' unique role and their ability to assess the needs of their areas and local residents. The resulting ability to instigate improvements in the energy efficiency of all residential accommodation is required to be summarised in a 'further report'. It also draws attention to recent energy efficiency related funding streams such as the Green Deal, Feed in Tariffs (FITs) and the Renewable Heat Incentive (RHI). This report is required to set out "the energy conservation measures that the authority considers practicable, cost effective and likely to result in significant improvements in the energy efficiency of residential accommodation in its area". There is a particular emphasis on measures that utilise government financial assistance and use an area based or street by street approach.

The report needs to be sent to the government and published on the Council's website. This report will be updated officially every two years, but will be used as an active document to track energy conservation and fuel poverty work by the Council on a quarterly basis. Resource has been found for a two days a week post until September and the Council hopes to attract funding to continue the work beyond this point.

### THE NATURE OF OXFORD AND HOW THIS FOCUSES THE COUNCIL'S APPROACH

Oxford's population was estimated to be around 154,000 in 2010 and it has the highest proportion of students in its population in the UK. As a result, one in five residents are aged between 18 and 24 years, and every year one-quarter of the city's residents moves house. Nearly one-fifth of the population is of non-white ethnic origin.<sup>2</sup>

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<http://webarchive.nationalarchives.gov.uk/20090908171815/http://www.defra.gov.uk/environment/climatechange/uk/publicsector/localauth/heca95/pdf/heca-condoc.pdf>

<sup>2</sup> [http://www.oxford.gov.uk/PageRender/decC/Statistics\\_about\\_Oxford\\_occw.htm](http://www.oxford.gov.uk/PageRender/decC/Statistics_about_Oxford_occw.htm)

Whilst Oxford can broadly be perceived as a healthy, relatively wealthy part of the country, this report will illustrate the issues and deprivation found at a more localised level. Oxford has 12 areas which are among the 20% most deprived areas in England - in Rose Hill, Littlemore, Barton, and the Leys (Blackbird and Greater). Seven of these areas are in the 15% most deprived and one area to the west of Greater Leys is among the 10% most deprived.<sup>3</sup>

The Council owns around 7,800 properties as social housing in Oxford, primarily in the Blackbird Leys, Rose Hill, Barton and Wood Farm areas - the more deprived regions. 400 of these are hard to treat (poorly insulated timber-framed and solid wall) and the properties that were sold under Right to buy have been highlighted as poor in terms of energy efficiency. Nationally, 29% of housing association tenants and 20% of council tenants had homes rated A-C (highest levels of energy efficiency) compared with 15% private rented and 8% of owner occupied.

The high prevalence of a transient (student) population means that Oxford has a very high proportion of private sector rented homes. In 2011, 28% of households rented their home in Oxford, which is much higher than the 17% national average and represents a nearly 50% increase from 2001<sup>4</sup>.

Both deprivation and private sector housing are aligned with a high frequency of poor energy efficiency, fuel poverty and poor health outcomes, so they therefore are key targets of the Oxford HECA strategy, amongst broader aims and projects.

## REPORT FORMAT

Whilst using DECC's suggested format, this report will set the current context in terms of available data and statistics. It will also celebrate good practice in past and current work that has been carried out by Oxford City Council and partners, whilst establishing future targets and detailing future projects.

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<sup>3</sup> [http://www.oxford.gov.uk/PageRender/decC/Economic\\_statistics\\_occw.htm](http://www.oxford.gov.uk/PageRender/decC/Economic_statistics_occw.htm)

<sup>4</sup> [www.oxford.gov.uk/oxfordstats](http://www.oxford.gov.uk/oxfordstats)

## 1. LOCAL ENERGY EFFICIENCY AMBITIONS AND PRIORITIES

### 1.1 CLIMATE LOCAL

Oxford City has committed to Climate Local via the Oxfordshire Environment Partnership and has also signed up to the Local Authority Fuel Poverty Commitment.

The Climate Local Commitment<sup>5</sup> commits us to “*progressively address the risks and pursue the opportunities presented by a changing climate, in line with local priorities*” through our role as community leader, estate manager and service provider. Specifically this means the Council will:

- Set locally-owned and determined commitments and actions to reduce carbon emissions and to manage climate impacts.
- Publish our commitments, actions and progress, enabling local communities to hold us to account;
- Share the learning from our experiences and achievements with other councils; and
- Regularly refresh our commitments and actions to ensure they are current and continue to reflect local priorities.

### 1.2 THE END FUEL POVERTY COALITION

The End Fuel Poverty Coalition<sup>6</sup> wants energy efficient homes, decent incomes and low cost fuel for low income households. Their target to eliminate fuel poverty by 2016 is one that the Council supports and has signed up to, and Oxford City Council has committed to their Local Authority:

- Make sure we understand the extent of fuel poverty in our area, its impact on health, housing and quality of life, and to take action to address it
- Make sure that the Joint Strategic Needs Assessment, agreed between Councils and local NHS organisations, informs strategies to tackle fuel poverty
- Work with partners such as Health and Wellbeing Boards and advice services to develop effective referral systems to reduce fuel poverty and cold-related ill health
- Develop a strategic approach to improve energy efficiency in all housing and fulfil its potential to create jobs and prosperity in our local communities
- Work with energy companies and related organisations to help make sure the Green Deal, Energy Company Obligation (ECO) and other energy efficiency programmes are delivered effectively in our area
- Administer the benefits we are responsible for efficiently and fairly, and help make sure eligible households receive the benefits to which they are entitled
- Explore ways of reducing fuel poverty that involve the whole community, including community groups and town and parish councils We want the Government to:
- Help us meet our ambitions to eliminate fuel poverty in our area
- Make sure Public Health Directors can effectively deliver on their responsibility for meeting the public health outcome on fuel poverty

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<sup>5</sup> [http://www.local.gov.uk/web/guest/the-lga-and-climate-change/-/journal\\_content/56/10171/3574359/ARTICLE-TEMPLATE](http://www.local.gov.uk/web/guest/the-lga-and-climate-change/-/journal_content/56/10171/3574359/ARTICLE-TEMPLATE)

<sup>6</sup> <http://www.endfuelpoverty.org.uk/index.html>

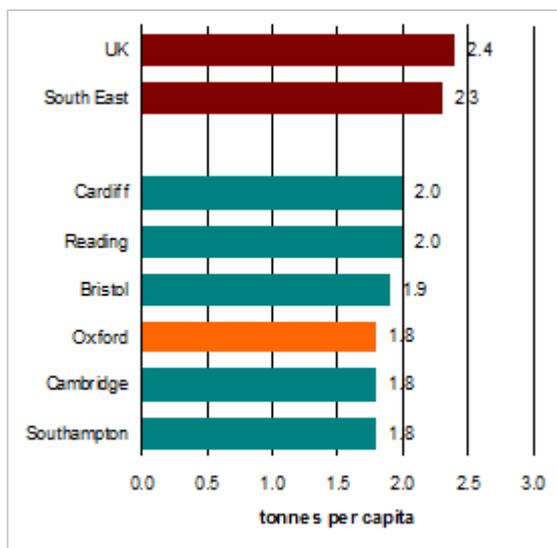
- Work with the LGA to support local authorities provide peer-to-peer support and sign up to locally appropriate actions and targets
- Help disseminate information and guidance on legislation, policy initiatives and best practice
- Help compile standardised housing stock data on all housing in the country
- Require Green Deal and ECO providers to inform local authorities of works taking place in their area, to enable authorities to report on referrals and outcomes
- Make sure we have the resources to make an effective contribution towards meeting the national target to eliminate fuel poverty by 2016. This includes looking to fund a vital energy efficiency and fuel poverty related post beyond September 2013 to drive performance.

## 2. BACKGROUND DATA ANALYSIS

### 2.1 CO<sub>2</sub> EMISSIONS

Oxford City's 2010 carbon emissions were 6.2 tonnes per capita, showing a reduction of 14% from 2005-2010 compared with 8% in the South East. (DECC)<sup>7</sup> Oxford's overall target to reduce CO<sub>2</sub> emissions is based on 2005 figures and aims for a 40% reduction by 2020. However, the focus of this report is on domestic emissions and these again look positive as they fell by 9.7% over the period 2005-2010 compared with a general reduction of 5.2% in the South East.

Whilst Oxford's industrial and commercial CO<sub>2</sub> is higher per capita than the national average or any of its comparator areas, those from domestic households are lower per capita than the national average, and similar to its comparator areas as shown in Figure 1.



**Figure 1: Domestic carbon emissions - tonnes per capita, 2010**

This is supported by Table 1 which shows yearly totals of the primary contributors to CO<sub>2</sub> emissions, domestic gas and electric. This shows that gas per consumer reduced from 18,315 kWh in 2005 to 15,045 kWh in 2010, and electricity from 4,488 kWh to 3,990 in 2010.

Oxford	2005	2006	2007	2008	2009	2010	2011
Gas per consumer (kWh)	18,314	18,158	17,858	16,960	15,330	15,045	14,404
Elec per consumer (kWh)	4,488	4,307	4,278	4,076	4,015	3,990	3,932

**Table 1: Average gas and electricity sales per household for Oxford**

A key fact is that little over half of these emissions are attributable to industrial and commercial users, which tends to vary from year to year. The emissions due to industry are higher per capita than national

<sup>7</sup> <https://www.gov.uk/government/publications/local-authority-emissions-estimates>

average or any comparator areas, and accordingly domestic emissions are actually lower than the national average. The breakdown of employment in the city is detailed in Figure 2<sup>8</sup>:

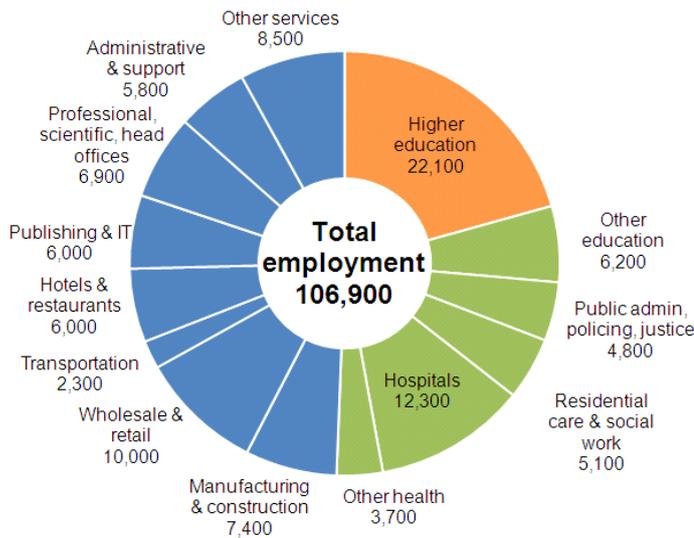


Figure 2: Jobs in Oxford by industry, 2009 (Source: Business Register and Employment Survey, ONS)

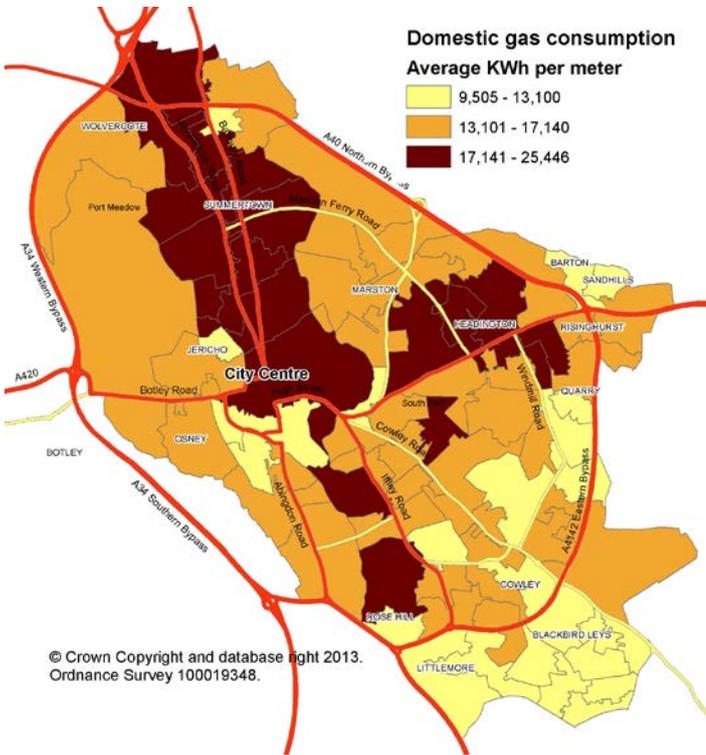
## 2.2 ENERGY USE

Average consumption has declined over the 2005-2010 period, both in Oxford and nationally. Domestic energy consumption varies significantly between different areas of the city. North Oxford, the region known to be more affluent, has the highest energy use. As energy consumption is worked out per household, the high number of large houses in this area is likely to explain this. Breaking energy use into gas (primarily space and water heating) and electric gives more detail:

- Domestic electricity consumption per consumer is very similar to but just below the national average – in 2010 this was 3,990 KWh compared to a 4,148 GB average.
- Domestic gas consumption is very similar to the national average, which has fallen over the period 2005-2010, but consumption is higher than Oxford’s comparator areas.
- Non-domestic electricity consumption per consumer is higher than the national average.

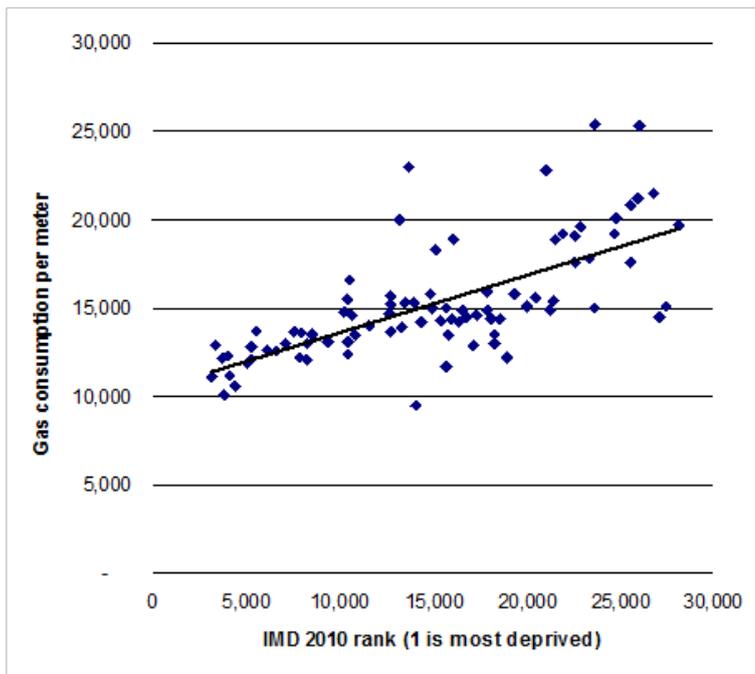
Gas use is mapped in Figure 3.

<sup>8</sup> [http://www.oxford.gov.uk/PageRender/decC/Economic\\_statistics\\_occw.htm](http://www.oxford.gov.uk/PageRender/decC/Economic_statistics_occw.htm)



**Figure 3: Domestic gas consumption by household meter - by Super Output Area**

The patterns on this map suggest that areas which are relatively deprived – that is, have high concentrations of people living on low incomes etc. – are the areas which tend to have lower average gas consumption. Figure 4 below maps levels of deprivation according to the 2010 Index of Multiple Deprivation and average gas consumption in that area, and shows that there is a relationship<sup>9</sup>:



<sup>9</sup> Mark Fransham, 2013

**Figure 4: Domestic gas consumption 2010 - KWh per meter against 2010 IMD by LSOA**

This supports the Council's approach to tackling the more deprived areas of the city as part of its energy efficiency and fuel poverty related work.

## 2.3 CONTEXT OF FUEL POVERTY WORK

The three key components leading to fuel poverty are

- energy efficiency of homes
- household income
- cost of energy

### 2.3.1 Pockets of deprivation and mortality

Deprivation in Oxford is lower than the UK average but 5,500 children still live in poverty. Whilst life expectancy in Oxford for women is higher than the England average, in most deprived areas life expectancy is 8.3 years lower for men and 6.6 years lower for women when compared to the least. When broken down into wards, the picture looks even worse for the more deprived wards. Table 2 indicates some inequalities between one deprived Ward and the Oxford average:

Feature	Barton & Sandhills	Oxford City
Life expectancy	77.5 years	80.9 years
Owner occupation	34 %	55%
With no qualification	42%	28.7%
Economically active	75.4%	65%
Unemployed	6.5%	6.0%
Students	5.9%	22.6%
Caring for relatives	10%	6%

**Table 2: Apparent inequalities between Barton & Sandhills Ward and Oxford City average**

### 2.3.2. Winter deaths and health issues related to cold

Cold homes affect the health of those people living there. Adequate heat is defined as 21°C in a living room and 18°C in other rooms. As room temperatures fall, there is an impact on health, which is shown in Table 3:

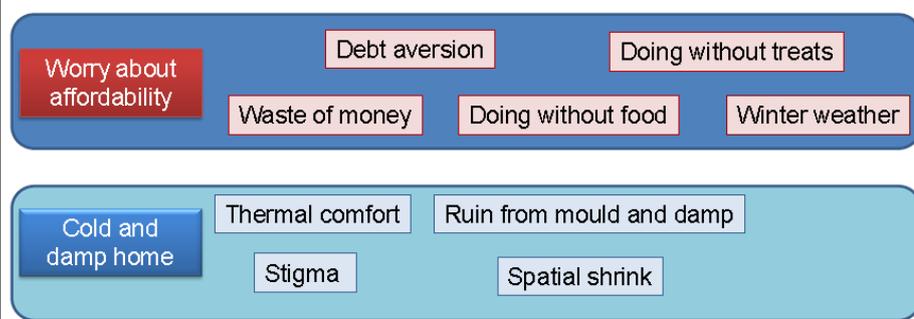
Indoor temperature	Comments
21°C	Recommended living room temperature
18°C	Minimum temperature with no health risk
under 16°C	Resistance to respiratory diseases may be diminished
9–12°C	Increases blood pressure and risk of cardiovascular disease
5°C	High risk of hypothermia

**Table 3: Impacts of indoor temperatures on human health**

There were 42 excess winter deaths in Oxford in 2012 which, whilst better than the England average, is still of concern (Oxford Health Profile 2012)<sup>10</sup> and only the tip of the iceberg of a wider set of poor outcomes associated with cold unhealthy housing. Whilst there are a number of variables related to winter deaths, this has reduced since 2009's figure of 56.

To put this into context, it is estimated that treating winter-related disease due to cold housing in the private sector costs the NHS around £849 million a year (Department of Health, 2009)<sup>11</sup> Whilst many countries experience worse winter weather, these frequently have lower rates of excess winter deaths, probably because they are more prepared for this weather. Studies “*improving heating and energy efficiency in the home identified improvements in general respiratory and mental health*” therefore making a case for improving energy efficiency of homes for health as well as fuel poverty and environmental reasons (NICE - Scope Consultation on Excess winter deaths and illnesses)<sup>12</sup>

The links between the mental health and fuel poverty are compounded due to the existence of two individual and damaging stressors illustrated in Figure 5: worrying about money and living in a cold and damp home. Recent research shows that this more than doubles the effect of stress on those living in fuel poverty.<sup>13</sup>



**Figure 5: Two separate stressors that fuel poverty can cause in people (Source: Liddell, 2013)**

Oxford Joint Strategic Needs Assessment (JSNA) is a shared data source between the Primary Care Trust (PCT) and local authorities which helps them understand the future health, care and well-being needs of their community. This data set broadly illustrates an increased prevalence of respiratory problems and disease, and therefore poorer health outcomes in the more deprived areas such as Blackbird Leys and Barton & Sandhills.<sup>14</sup>

### 2.3.3 Fuel poverty data

“*Fuel poverty statistics estimate the number of households that need to spend more than 10 per cent of their income on fuel to maintain a satisfactory heating regime, as well as meeting their other fuel needs (lighting and appliances, cooking and water heating)*”.<sup>15</sup>

<sup>10</sup> [http://www.apho.org.uk/resource/view.aspx?RID=50215&SEARCH=O\\* \).](http://www.apho.org.uk/resource/view.aspx?RID=50215&SEARCH=O*)

<sup>11</sup> [http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/AnnualReports/DH\\_113912](http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/AnnualReports/DH_113912)

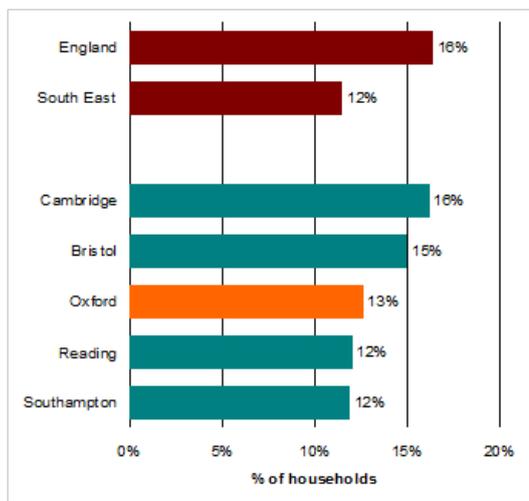
<sup>12</sup> <http://www.nice.org.uk/guidance/index.jsp?action=folder&o=62689>

<sup>13</sup> <http://www.insidegovernment.co.uk/fuel-poverty-speaker-presentations377>

<sup>14</sup> <http://www.oxfordshirepartnership.org.uk/wps/wcm/connect/occ/OxfordshirePartnership/Partnerships/Health+and+Well-Being+Partnership/JSNA/>

<sup>15</sup> <http://www.statistics.gov.uk/hub/business-energy/energy/fuel-poverty>

In 2010, 12% of Oxford homes (around 7000 households) were estimated to be fuel poor.<sup>16</sup> This is better than the England average and the same as the average for the South East. Figure 6 sets out how Oxford is performing in comparison with other comparator cities and regions:



**Figure 6: Proportion of households in fuel poverty, 2010**

Whilst fuel poverty data was found to be reliable at the city wide level, the Council’s data analysis showed that this was not the case at Super Output Area (SOA). There were high yearly fluctuations, and a lack of availability of confidence intervals. The underlying criteria for the indicator are dwelling age, age profile for the population, households with central heating, adult qualifications, tenure and economic activity rates. As Oxford has the highest proportion of students in the country (Census, 2011), this is a potential cause of the data issues. Therefore, fuel poor areas were not aligned with the areas known to suffer from high levels of deprivation (i.e. the seven Oxford SOA in the worst 15% IMD areas). Additionally, the government has recognised the weaknesses with the current indicator reflected in the Hills Review. Therefore awaiting the new governmental indicator and strategy, this data is disregarded awaiting updates.

### **2.3.4. Fuel poverty, energy efficiency and health data for private sector housing**

To meet the previously detailed gap in data, the Council has commissioned the Building Research Establishment (BRE) to carry out Housing Stock Modelling. This will provide more health, energy efficiency and fuel poverty data on its private sector housing stock, and will be completed by June 2013. The fuel poverty element of this model uses Experian dwelling level data which represents a different approach from the DECC Local Fuel Poverty indicator. This should help to evidence and support current fuel poverty approaches and initiatives, and any change to the fuel poverty definition as indicated by the government consultation following the Hills Review<sup>17</sup> will be incorporated when possible.

<sup>16</sup> [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/66015/decc\\_local\\_authority\\_data.xlsx](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/66015/decc_local_authority_data.xlsx)

<sup>17</sup> [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/66570/6406-fuel-poverty-changing-the-framework-for-measureme.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/66570/6406-fuel-poverty-changing-the-framework-for-measureme.pdf)

## 2.4 PAST AND CURRENT FUEL POVERTY WORK

### 2.4.1 Fuel poverty grants

Historically the Council has provided fuel poverty grants, aimed at improving the energy efficiency of private sector properties, and filling gaps and shortfall from national grants such as CERT and Warm Front funding. There was a change in approach in 2012/13 – the £25K annual fuel poverty grant budget was used to contribute to resourcing a strategic Green Deal/ECO ‘go early’ pilot project, Warming Barton, which has been crucial in helping to lever in additional funding to a deprived area. It is anticipated that the Council will continue this level of financial commitment in future years and the intention is to deploy these resources to seed fund area based approaches to tackling fuel poverty in other Oxford areas of high Index of Multiple Deprivation.

### 2.4.3. Fuel poverty – Projects aimed at vulnerable people

The types of people most likely to suffer from negative health effects of fuel poverty are the elderly, infants, disabled people and those living with long term sickness.<sup>18</sup> Proportional levels of each across Oxford are mapped in Figure 7 and have helped and will continue to help guide the Council’s approach:

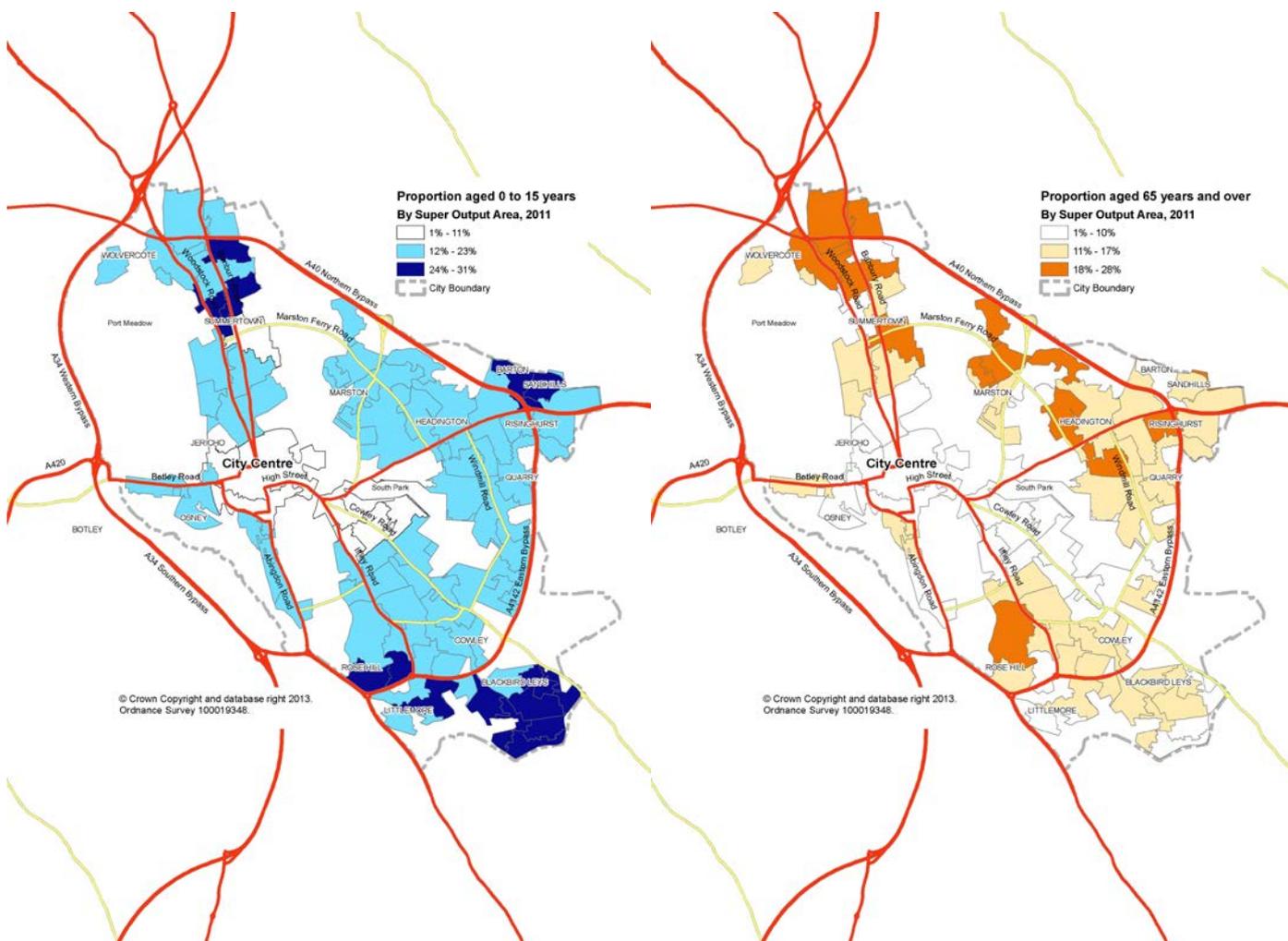


Figure 7: Proportion of Under 16s and Over 65 year olds by SOA, 2011

<sup>18</sup> <https://www.gov.uk/government/publications/final-report-of-the-fuel-poverty-review>

Recent research indicated two groups as more vulnerable than previously thought:

- Younger people (under 65) with Alzheimer's Disease/dementia, and
- The under 5's

Accessing Department of Health's Warm Homes Healthy People grant funding, the broader 2011-12 (£160K total) and 2012-13 (£153K total) Oxfordshire wide Warm Homes Healthy People project offers:

- Information on how to stay warm and well during the winter months
- Financial support to help with fuels bills
- Advice on benefits

The City Council signposts people to the above services, whilst providing some specific services itself. Their Home Improvement Agency team in Environmental Development is responsible for administering energy saving home improvement grants to vulnerable residents (on income related benefits) and carrying out works for them.

The Communities and Neighbourhoods Team at the Council have utilised the following in order to support vulnerable residents such as older people, young families and vulnerable community groups:

- Community engagement to help reach isolated older people in the City
- Energy advice training with the Citizen's Advice Bureau<sup>19</sup>
- Targeted mailing to postcode areas with the highest fuel poverty and over 60s on Council Tax benefit to raise awareness of Warm Homes Healthy People project and helpline etc.
- The Council also negotiated with partners to release another £10,000 for vulnerable people in Oxford City for fuel vouchers

Whenever available, the Council will continue to access this funding to help vulnerable people across the city.

Other grants and loans are provided yearly by Oxford City Council to improve the thermal comfort and/or energy efficiency of homes for vulnerable home owners, primarily those on certain benefits:

- *Mandatory/ Discretionary Disabled Facility Grants* - including heating systems and those that facilitate the use of source of power, light or heat
- *Essential Repair Grants* include replacement windows/ doors, primary source of heating/ hot water breakdown, roof or chimney works etc., and
- *Small Repairs Service* – can include draught proofing, reflective radiator panels and other small measures.
- *Flexible Home Improvement loans* - e.g. essential repairs, central heating or improvements to central heating, replacement doors and windows.

The Council is keen to develop this further, by utilising Energy Company funding for vulnerable residents for further measures that can be accessed under the Affordable Warmth Stream of Green Deal finance. This would also include setting up systems and information that can be utilised to enable cross referrals across the services of the Council and their partners. However, funding for such a post still needs to be found for after 31 August 2013.

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<sup>19</sup> <http://www.oxford.gov.uk/PageRender/decO/OlderPeople.htm>

#### **2.4.4 Following the government's lead in a strategic approach to Fuel Poverty**

At the Housing Board in September 2012, the Council committed to producing a Home Energy and Fuel Poverty Strategy. However, it was subsequently agreed that this should wait until the new fuel poverty indicator and strategy from the government was released in order to complement a standard approach. It will incorporate data from private rented and social rented sectors.

### 3. UTILISING GOVERNMENT FUNDING:

#### 3.1 GREEN DEAL AND ECO

##### 3.1.1. Background: The Low Carbon Hub and Low Carbon Oxford

The Low Carbon Hub was established as part of Oxford City Council's DECC Low Carbon Frameworks funded project, with the intention to support low carbon community groups in Oxford and help householders to reduce their carbon emissions. This in turn supports the City Council's target of 40% carbon reduction in Oxford by 2020, based on 2005 levels.

Low Carbon Oxford is a partnership of key organisations across Oxford –together responsible for over 50% of the total carbon emissions of the City. This partnership was established by Oxford City Council to deliver progress towards the ambitious 40% target across all sectors.

##### 3.1.2 Low Carbon Frameworks project

Oxford was one of 9 leading Local Authority (LA) areas in the UK invited to take part in the 2011 Department of Energy and Climate Change (DECC) sponsored Local Carbon Frameworks project. This allowed the Council to lever in nearly £360k of additional funding. The major project – and one very relevant to HECA –was to build on the lessons learnt by one of the leading low carbon community groups in the country - Low Carbon West Oxford - and roll out in adapted format in other areas of the city. The outcomes were:

- A Low Carbon Living Programme that worked with community groups in the north, and south of Oxford to engage households in quantifying their carbon footprint, changing their behaviour, improving the energy efficiency of their homes, and benefiting from government incentives.
- Helping to kick-start other Oxford low carbon communities projects and resulted in the establishment of the Low Carbon Hub as a support mechanism.
- Providing a framework for delivering residential carbon reduction under the Low Carbon Oxford target of 40% carbon reduction from all sectors across the city by 2020 (2005 baseline)
- Recruiting a local community group with a pre-established renewables financial model (see below) to lead a renewables roll out project. This model enabled the successful installation of the following projects:
  1. Oxford North Community Renewables attracted £155,000 from shareholders to put 46 kW Peak solar photovoltaics on the roof of Cherwell School.
  2. Low Carbon Barton installed 13 kW Peak solar photovoltaics on their neighbourhood centre (the FIT income is being used to sustain the activities of the group into the future)
  3. Low Carbon South Oxford now have a 6 kW wind turbine on Hogacre Common

#### **The West Oxford Community Renewables (WOCORE) Model<sup>20</sup>**

*This raised money from investors, government grants and prize money then invested the capital in community renewable energy projects to harness the natural resources of the area - Solar, Wind and Hydro.*

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<sup>20</sup> <http://www.wocore.org.uk/index.php/renewable-energy-projects/future-sites/hogacre-common>

*As well as generating green energy, the projects generated income through the sale of the electricity and the Feed-in-Tariff. Surplus income was donated to support further carbon reduction projects in the community.*

### **3.1.3. Green Deal Pathfinder and current work**

The Council initially analysed data and produced maps/street maps of the Oxford areas that met high levels under the Index of Multiple Deprivation. It was realised that the following issues in Oxford made it harder to fund under the traditional Green Deal than many English cities:

- Large number of solid wall houses
- Heritage buildings with specific needs
- Twice the UK average proportion of private rented properties
- Some very inefficient properties, including hard-to-treat, in areas of town with high percentage of benefit households

This understanding was used in a City Council funded pilot that aimed at reducing energy bills and making homes warmer and healthier. Warming Barton, a partnership project to help residents save energy, save money and keep warm took place in Barton, a very deprived area. It resulted in 58 home energy assessments with 841 measures recommended, split by level/cost of the action. By time of second visit householders implemented low and no cost measures saving 5 tonnes of CO<sup>2</sup> and £1000 p/a between them. Additionally, the retrofit of a demonstration home is currently under way and this will be used to illustrate key energy efficiency concepts and technologies in a user friendly way.

Warming Barton was used as the basis of a bid to the DECC Green Deal/Pioneer Places fund, to expand on the Barton project, target more households with low income and poor energy efficiency and use the evaluation of the approach to inform future work in other deprived areas of the city, and £310k was secured. The project was also used to determine properties in need of external wall insulation in order to inform discussions with energy utility companies on how they might fulfil their new Energy Company Obligation to invest in home energy improvements. The Council fully expects this to result in a £500k+ of investment in homes in Barton.

### **3.1.4 Green Deal Plus Taskforce and Strategy**

Oxford City Council successfully bid for DECC Green Deal Pioneer Places funding of £310K which is being used to build on Warming Barton. This Oxford Green Deal + will enable building retrofit for carbon reduction via partnership work with the Low Carbon Hub and Low Carbon Oxford.

The Oxford Green Deal+ multi-agency Task Force and Strategy has been set up with an overarching goal to enable its members, community groups, SMEs, LCO pathfinder organisations and service providers, to develop integrated Green Deal implementation and collaboration plans. These plans will help achieve the 40% reduction in CO<sub>2</sub> emissions in Oxford by 2020 through energy efficiency measures, behaviour change and the increased use of renewable energy technologies..

This will act as a facility to highlight key areas and approaches for action on reducing carbon from buildings in all sectors across Oxford, including signposting and advice for householders of all tenures and abilities to pay via a maintained website.

Other work that is current as part of this is:

- The Council and partners are currently working on the Green Deal signposting webpage

- Barton Pilot: the Low Carbon Hub are signing up and assessing around 100 'hard to treat' households by the end of April 2013 using a local Green Deal assessor (48 were found in 2012 via LEAF project)
- 98 properties have been found by the Low Carbon Hub to be eligible for external wall insulation. The Council's partner, the Energy Saving Co-op, is currently negotiating with Energy Companies to fund these measures.
- Working with community groups to bring forward benefit households to help them secure ECO funding
- SME Pilot: a workshop was held and an approach to non-domestic assessments to be completed by the end of April
- As Oxford has a high amount of historic and traditional buildings, the Council has commissioned and is working with BRE to produce a Heritage and Energy Efficiency web tool and report, covering residential and non-domestic buildings. This is aimed at the public and due to be completed by the end of April 2013.
- Community Capacity Building & Training: to be delivered in parallel with the Warmer Homes Healthy People Project and to train up Green Deal advisors.

By April 2013, Low Carbon Oxford in partnership with the Low Carbon Hub, Oxford City Council and other partners, will have submitted:

- A paper on Oxford Green Deal Plus infrastructure and strategy
- A paper on Oxford Fuel Poverty infrastructure and strategy, and
- A final report and implementation plan

### 3.1.5. Working with partners to access funding

Supporting the Green Deal, the Energy Companies Obligation (ECO) Carbon Savings Community Obligation (CSCo) will target households across Great Britain in specified areas to improve energy efficiency standards. The CSCo will focus on low income households and areas and will contribute to removing families from fuel poverty through ensuring that their properties receive energy efficiency measures. The lowest 15% of areas ranked in the IMD will qualify for inclusion within the CSCo element of ECO. Up to 20% of activity under CSCo may be undertaken in areas adjoining those specified in the lists below. Oxford has seven Lower Super Output Areas that are in the 15% most deprived in the UK<sup>21</sup> and these are detailed in Table 4 below and these are mapped in Appendix 2

LSOA Code	LSOA Name	LA Code	LA Name	Name of area
E01028568	Oxford 018B	38UC	Oxford District	Blackbird Leys
E01028577	Oxford 016F	38UC	Oxford District	Rose Hill
E01028520	Oxford 018A	38UC	Oxford District	Blackbird Leys
E01028569	Oxford 018C	38UC	Oxford District	Blackbird Leys
E01028514	Oxford 005B	38UC	Oxford District	Barton
E01028513	Oxford 005A	38UC	Oxford District	Barton
E01028518	Oxford 017B	38UC	Oxford District	Blackbird Leys

**Table 4: Oxford Super Lower Output areas included in the 15% worst IMD areas in England**

<sup>21</sup>[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/48405/5536-carbon-saving-community-obligation-rural-and-low-.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/48405/5536-carbon-saving-community-obligation-rural-and-low-.pdf)

- Barton is one of the primary area of deprivation (as detailed in Table 4) where funding is being sought on behalf of the Council and its partners by the Energy Saving Co-op
- The funding is being sought primarily for external wall insulation but will optimise the offer per property through bilateral discussions and brokering
- ECO top up funds are also being investigated for Oxford City Council by the Energy Saving Co-op
- The project aims to work with local installers to promote local skills and trade
- Negotiations with energy companies will also include accessing measures under Affordable Warmth in order to ensure vulnerable residents gain support.
- Data obtained from stock modelling by the Council will inform the funding approach in the future.
- A strategy for the Green Deal Task Force will focus and clarify processes, funding, roles and arrangements to optimise the access of Oxford residents to available funding.

### 3.1.6. Oxfordshire Total Retrofit Project

This project will be informed and guided by the evaluations of the previous retrofit and renewables work carried out as part of the Green Deal Pathfinder and Green Deal Plus projects.

In partnership with Oxfordshire County Council, the City Council's innovative Oxfordshire Total Retrofit project has levered in £930,000 of European grant funding for a £1.24m programme to develop a financial infrastructure that will result in high levels of private sector funding for local retrofit. By acting as an Oxfordshire funding vehicle – a 'green bank', it will create 3.2MW of sustainable, community-owned energy, 300 whole house domestic retrofits, 2.9MW of sustainable energy and 19,600MWh of reduced energy demand on the public estate by attracting around £24m investment. The aggregated domestic retrofitting will utilise Green Deal, Energy Company Obligation funding and/or alternatives such as mortgages resulting in domestic renewable energy and energy efficiency projects.

Work commenced in January 2013 and aims to be completed (or investments committed) by the end of 2015.

## 3.2 INSULATION SCHEMES

Over the four years of CERT (2008-2012), Oxford had 1,633 cavity wall insulation and 2,228 loft insulation measures installed, representing 6% of Oxford homes as shown in Table 5.<sup>22</sup>

Cavity Wall insulation 2011/12		Loft Insulation 2011/12	
Cumulative count	Count per 10,000 household	Cumulative count	Count per 10,000 household
1,633	287	2,228	391

**Table 5: Cumulative insulation types in Oxford in 2011/12 under CERT scheme**

The total number of cavity wall insulations per household in Oxford is less than half the national average, and has grown at a slower rate. The number is also low compared to its comparator local authority areas. The number of loft insulations shows a very similar

<sup>22</sup> (<http://www.energysavingtrust.org.uk/Organisations/Government-and-local-programmes/Free-resources-for-local-authorities/Homes-Energy-Efficiency-Database/CERT-reports-from-HEED>)

pattern to the number of cavity wall insulations – less than half the national average, and lower than its comparator areas.

However, highlighting the history of energy efficiency work at Oxford City Council, figures showing dwellings getting HEES grants from 1 April 1991 to 31 March 2000 totalled 4198 and a value of £642,950. More recently, a CERT broking system with the local EST advice centre ensured the fuel poor in Oxford had the best deal from the available national grants (Warm Front and CERT funded deals from utilities). This made sure that qualifying householders accessed CERT funds for basic insulation, leaving maximum amount available to the householder from Warm Front for more expensive measures such as heating systems.

Previous HECA reports show that between 1 April 1996 and 31 March 2008, the Council achieved a 30.2% improvement in energy efficiency, with much of this being insulation related.

### 3.3 FEED IN TARIFFS (FITS) SCHEME

Data captured by DECC in Table 6 shows the Solar PV that was installed under the Feed in Tariffs scheme but this will not include all solar PV installations prior to the commencing of the programme.

Installations at end of June 2012	
Cumulative Number Domestic PV Installed	Number of Domestic PV Installations per 10,000 Households
402	70.6

**Table 6: Cumulative number of Solar Photo voltaic panel installations at end June 2012 under Feed in Tariffs programme**

The Council has installed a number of solar PV panels on its own estate and these are detailed in Table 7.

Site	Installed capacity/kWp	Estimated Annual generation/Kwh	Estimated tCO2 emissions avoided
Barton Leisure Centre	48	40,480	22
Cardinal House (Sheltered Housing)	32	25,896	14
Ferry Leisure Centre	33	27,589	15
Headley House (Sheltered Housing)	34	28,054	15
Knights House (Sheltered Housing)	34	28,054	15
<b>Totals</b>	<b>181</b>	<b>150073</b>	<b>81</b>

**Table 7: Oxford City Council Solar PV installations completed by 31 March 2012**

### 3.4 RENEWABLE HEAT INCENTIVE (RHI) PAYMENTS

No data is available for Oxford, but for the South East, Renewable Heat Premium Payments for householders totalled 573.<sup>23</sup> Before the RHI, the Council has installed solar thermal in its own housing stock on elderly persons bungalows, two blocks of flats and to a sheltered housing block all with solar P.V. to power the pumps. Centralised biomass systems have been installed for 14 new Council flats in the centre of Oxford and as part of the refurbishment of Cardinal House sheltered housing scheme.

As a lead partner in the Oxford Solar Initiative, Oxford City Council was instrumental in the installation of over 100 solar PV and solar thermal domestic across the city. These are detailed in the map in Figure 8:

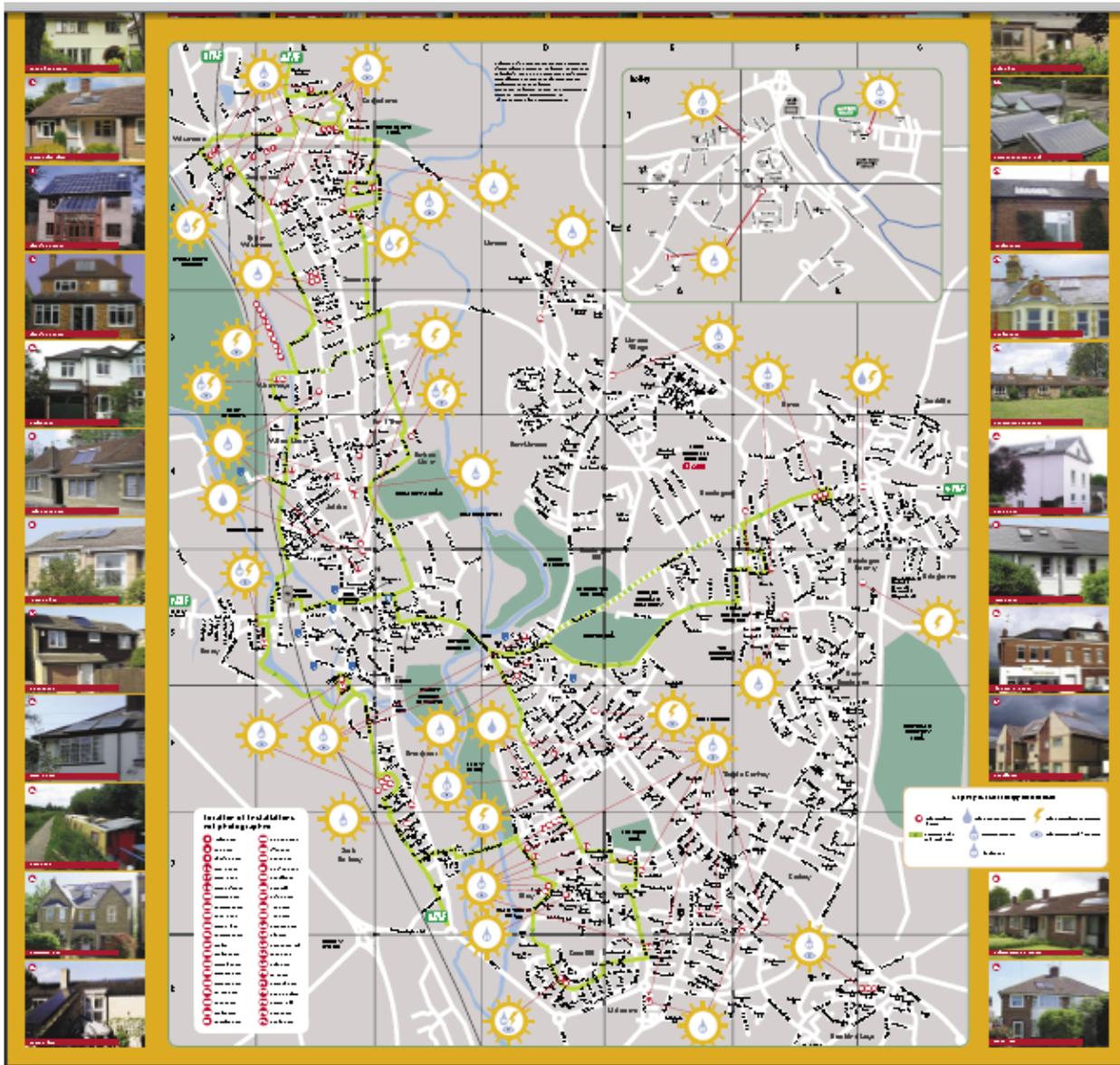


Figure 8: Oxford Solar Map

<sup>23</sup> <https://www.gov.uk/government/publications/renewable-heat-incentive-rhi-and-renewable-heat-premium-payments-rhpp-quarterly-statistics-march-2013>

## 4. TOWARDS ZERO CARBON HOMES

### 4.1 PLANNING GUIDANCE

Oxford City Council's Planning Policy HP11 Low Carbon Homes (adopted through the Sites and Housing Plan 2013) requires 20% of energy needs for new homes and student accommodation to be sourced from on-site renewables or low carbon technologies. (Non-residential development proposals still must comply with the Natural Resources Impact Analysis (NRIA) checklist which is found in the NRIA Supplementary Planning Document (2006)). The text of policy HP11 has been duplicated below:

*“Planning permission will only be granted for proposals for residential and student accommodation development if the development includes an element of on-site renewable or low carbon technologies where practicable. All development proposals must submit an energy statement to show how energy efficiencies have been incorporated into the development.*

*Planning permission will only be granted for qualifying developments where development proposals include at least 20% of their energy needs from on-site renewable or low carbon technologies, unless it can be robustly demonstrated that such provision is either not feasible or makes the development unviable. The energy statement must include details of how the 20% target will be achieved.*

*For the purposes of this policy, qualifying developments are:*

- 10 or more dwellings, or*
- 20 or more student rooms, or*
- 500 m<sup>2</sup> or more of student accommodation (gross internal area) even where there are less than 20 rooms.”*

*Until 31 September 2013, The NRIA SPD checklist will be used to assess compliance with this policy. The NRIA would no longer apply to residential developments or student accommodation from 1<sup>st</sup> October 2013. From this date, Part L of the Building Regulations will require improved energy efficiency standards in all new residential development.*

Until such time that the Building Regulations updated to exceed the 2010 requirements for Part L (energy efficiency), the Natural Resources Impact Analysis (NRIA) checklist will be used to assess the sustainability of qualifying development proposals in the City.

The NRIA Supplementary Planning Guidance Document <sup>24</sup> was adopted by Oxford City Council in November 2006 and requires the checklist to be used for all major developments (see NRIA SPD for full details of what constitutes qualifying development). Whilst also setting out standards for SAP ratings (energy use) as a 'Minimum, Preferred or Best', the NRIA also requires consideration of the questions laid out in Table 8:

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<sup>24</sup> <http://www.oxford.gov.uk/Direct/65335adoptedNRIASPD.pdf>

<i>How will the design and layout ensure that energy is used efficiently in the scheme?</i>	
1.	Has an energy strategy been prepared?
2.	How is the development designed to maximise beneficial solar gain? (through orientation, spatial layout and systems design)
3.	How will the design of the building make efficient use of energy? (linked buildings, buffer zones, thermal mass etc)
<i>How will the construction of the buildings ensure efficient use of energy and reduce overall energy use?</i>	
4.	What insulation standard will the development be built to?
5.	How is the development designed to minimise unwanted air infiltration?
6.	What glazing standard will the development be built to?
<i>How will the mechanical and electrical systems of the buildings ensure efficient use of energy and reduce overall energy use?</i>	
7.	What efficiency standard will boilers be specified to?
8.	Will the development be linked to a combined heat and power plant or to a district heating system?
9.	How has the development been designed to maximise controlled natural ventilation?
10.	Will any mechanical ventilation to be incorporated be of high efficiency?
11.	How has the development been designed to maximise natural daylight?
12.	How will the development incorporate high-efficiency lighting?
13.	How will the development incorporate high-efficiency appliances (where installed)?
14.	How will the heating, lighting and ventilation systems be controlled?

**Table 8: Energy Efficiency questions to be addressed in an NRA (adapted from Oxford City Council NRA SPG)**

From the date of the adoption of the Sites and Housing Plan, the submission of Part A of the Energy Statement is required for all non-qualifying housing and student accommodation developments (for details see above). The energy statement, as seen in Appendix 4 will ultimately replace the NRA checklist as the means of assessing sustainability criteria in development proposals for residential developments.

## 4.2 BUILDING REGULATIONS

The Council's Building Control team ensure that all new developments meet the Building Regulations. Of relevance to energy efficiency is their enforcement of Part L: Conservation of Fuel and Power (New dwellings) and Part L2 for buildings other than dwellings<sup>25</sup>. The new Part L 2013, which is aiming for a further 25% reduction in carbon emissions is scheduled to come into force in October 2013 and it is expected that this will supersede current requirements for Oxford's Planning policies. However no draft documents have been produced for review. The Council understands that a decision will be made before the end of June. As it stands at the moment, zero carbon is aimed for 2016 in domestic new build dwellings and 2019 for non-domestic new build.

Installation of insulation is not a Building Regulations statutory notification stage, requiring an inspection, however the Council's Building Control team have begun to phase in an insulation inspection into their inspection regime. This is in response to the criticality of insulation in modern buildings and also to ensure new insulation products are being used in accordance with the manufacturer's guidance and their test certification.

The Building Control team are also very mindful of new insulation products becoming available, particularly reflective, multi foil quilt insulations and undertake regular CPD on this subject. The team also have a member of staff attaining her National Home Energy Rating qualification which will enable her to provide

<sup>25</sup> [http://www.oxford.gov.uk/PageRender/decP/Building\\_Control\\_occw.htm](http://www.oxford.gov.uk/PageRender/decP/Building_Control_occw.htm)

SAP calculations and EPCs alongside providing information for the day to day thermal performance enquires.

## 4. ENERGY PERFORMANCE CERTIFICATES (EPC) AND MINIMUM STANDARDS IN THE PRIVATE RENTAL SECTOR

### 4.1 BACKGROUND

Whilst the energy efficiency will vary, the UK private rental sector has been shown to have a much higher percentage of G rated Energy Performance Certificates (EPCs) than other tenures. The average SAP rating for private sector housing in Oxford City is estimated as 62.1 which corresponds to Band D on an EPC. An Energy Performance Certificate must be produced when a property is sold or let. EPC data shows 7% of the private sector homes in Oxford as having an unsatisfactory EPC F and G rating (1487).<sup>26</sup>

Additionally, from 2016 tenants will have the right to demand that landlords undertake 'Green Deal-able' works, then from 2018 landlords will be restricted from renting out the F&G rated homes.<sup>27</sup>

The Council has a number of statutory services that deal with the private sector including enforcement against Category 1 Excess Cold under the Housing Health and Safety Rating System (HHSRS) within the private rented sector, additionally requiring EPC certificates.

### 4.2. PLANNED WORK WITH PRIVATE SECTOR HOUSING

#### **HHSRS Enforcement - using the EPC database and Housing Stock Modelling to target the poorest performing homes**

Oxford City Council has secured access to the EPC bulk data, which includes a variety of energy related information assessed within the EPC certification process from Landmark Securities. Whilst some care needs to be taken with accuracy, of 23,891, 1500 are currently rated F or G.

The Housing Stock Modelling that the Council have commissioned BRE to carry out evaluates on a property by property basis and includes the following relevant hazards and indicators under the Housing Health & Safety Rating System (HHSRA): 'excess cold', simple SAP, fuel poverty and low income households. This enables enforcement teams to prioritise action and prioritise those properties and property types that pose the greatest risk to health.

Supporting this approach is the use of the EPC bulk data to target landlords of EPC F and G rated private sector rented properties. This will be trialled in single occupancy homes initially and rolled out to Houses of Multiple Occupation (HMOs) later in 2013. To ensure accuracy, the EPC data has been checked, and the Council's knowledge of individual properties to target the worst offenders.

However, this will be a dual approach, both enforcing against unacceptable levels of energy performance, whilst advising and signposting landlords on how to improve property's energy efficiency and thermal comfort for occupants. Discussions are on-going with energy companies in order to enable the Council to

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<sup>26</sup> Average figures taken from the EPC Database for Oxford – from Landmark

<sup>27</sup> <http://www.energysavingtrust.org.uk/blog/2012/07/09/energy-efficiency-in-the-private-rented-sector-all-change/>

help guide residents and landlords to potential funding streams for measures under Affordable Warmth and ECO.

## 5. SMART METERS

Energy suppliers are likely to start installing smart meters across the country in 2014, though some have started already. Some suppliers may respond to requests for smart meters; others will work through areas one at a time and the roll out will not be complete until 2019.<sup>28</sup>

Oxford City Council plans to follow the UK government's advice to contact different energy companies to see what their plans are and how they can be engaged in Oxford.

## 6. THE COUNCIL'S OWN HOUSING STOCK

### 6.1 PAST WORK

With 7,800 homes in its own housing stock, the Council has achieved the Decent Homes Standard but also ensures that this good level of repair is kept current through appropriate maintenance. 400 hard to treat properties have been identified and the ex-council house properties are mapped as potential targets for future ECO grants

Oxford City Council also continue to improve energy efficiency in their own housing. Current average SAP performance is estimated to be around 72. Whilst a good result (EPC – C rating), there is now a need to update the SAP assessments to check accuracy. In order to address this, the Housing team have scheduled Housing Stock Condition Surveys for 50% of stock due for completion in September 2013. This will enable them to compare actual against previous SAP ratings to assess accuracy. Broadly, the following approach has been taken.

Heating related works - "A" energy rated condensing boilers are always fitted in with new and replacement systems having thermostatic radiator valves and modern controls. Grant funding has enabled insulating of systems and pipes within central boiler rooms of sheltered schemes.

- 3886 gas condensing boiler upgrades
- Centralised biomass systems have been installed for 14 new Council flats in the centre of Oxford and as part of the refurbishment of Cardinal House sheltered housing scheme.
- A new build scheme of general housing has seen air source heat pumps and solar P.V. installed in 38 properties.
- Solar thermal has been rolled out to older person bungalows, and two blocks of flats, funded by the Clear Sky project.

Insulation and glazing – • Loft insulation is topped up to 270mm when new heating systems are installed or during re-roofing contracts, if any lofts have under 100mm insulation they are topped up under responsive repairs. All pipes are lagged. Cavity wall insulation has been put in to all homes that can have it

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<sup>28</sup> <http://www.energysavingtrust.org.uk/Electricity/Smart-meters>

with external insulation being rolled out to homes with no cavity and non-traditional houses. Double glazing with low emissivity (low e) glass has been put into over 90% of homes.

Previous works carried out to date include:

- 3,465 cavity wall insulation installations
- 424 external wall insulation installations
- 7,369 window replacements with double glazing

A recent small scheme has resulted in the Council forming a successful partnership with Low Carbon West Oxford which provided solar photo voltaics on a block of five Council houses. The tenants receive free electricity and receipts from the Feed In Tariff will go to fund additional activity in the community. The Council's Housing team are currently exploring options to fit more on Council sheltered housing blocks.

The Council provides a number of useful publications for its housing tenants, including one on energy efficiency and one on the Energy Performance Certificates.<sup>29</sup>

## 6.2 RECENT WORK AND PLANS FOR THE FUTURE

A recent trial of external wall insulation on three terraced properties enables the Council's housing team to evaluate energy bill reductions and work with tenants.

A 2010 Technology Strategy Board (CLG) funded project enabled the Council in partnership with Ridge & Partners and Brookes University, to extensively improve an end of terrace, solid walled property. This included the installation of many regeneration measures, such as solar thermal hot water, solar P.V. and a heat recovery ventilation system, together with much improved floor, roof and external wall insulation, window/door improvements and draught proofing. The energy consumption was then closely monitored and analysed by Brookes University over a two year period to inform future projects.

Future projects where funding is currently being negotiated by Oxford City Council or will be negotiated with energy companies or government funders are:

- Planned upgrades of external wall insulation and potentially other measures on five Tower Blocks over next few years
- Upgrades of sheltered housing with LED lighting
- Energy efficiency works required in current hard-to-treat housing stock detailed to energy companies to optimise current funding and carbon emission reductions
- Complementary or separate consideration of a street by street approach to external wall insulation where there is a mix of current council housing and Right to Buy properties
- An energy efficiency programme of works in 2014-15

The Council also works with local housing associations and will be coordinating discussions on fuel poverty and energy efficiency issues and potential funding throughout 2013.

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<sup>29</sup> [http://www.oxford.gov.uk/PageRender/decH/Council\\_Housing\\_Publications\\_occw.htm](http://www.oxford.gov.uk/PageRender/decH/Council_Housing_Publications_occw.htm)

**Energy conservation reports<sup>30</sup>**

(1)[F1Subject to subsection (7),] it shall be the duty of every energy conservation authority to prepare a report in accordance with this section.

(2)The report shall set out energy conservation measures that the authority considers practicable, cost-effective and likely to result in significant improvement in the energy efficiency of residential accommodation in its area. .

(3)The report shall include— .

(a) an assessment of the cost of the energy conservation measures set out in it; .

(b)an assessment of the extent to which carbon dioxide emissions into the atmosphere would be decreased as a result of those measures; and .

(c)a statement of any policy of the authority for taking into account, in deciding whether to exercise any power in connection with those measures, the personal circumstances of any person. .

Nothing in this subsection shall be taken as requiring the authority to set out in the report energy conservation measures to be taken in relation to any particular dwelling or building.

(4)The report may, if the energy conservation authority considers it desirable, include— .

(a)an assessment of the extent of decreases in emissions into the atmosphere of oxides of nitrogen and sulphur dioxide which would result from the implementation of the measures set out in the report; .

(b)an assessment of the number of jobs which would result from the implementation of those measures; .

(c)an assessment of the average savings in fuel bills and in kilowatt hours of fuel used that might be expected to result from the measures by different types of household in different types of accommodation; .

(d)such other matters as it considers appropriate. .

(5)An energy conservation authority may in preparing the report consult such persons as it considers appropriate. .

(6)When an energy conservation authority has prepared a report in accordance with this section, it shall publish it and send a copy to the Secretary of State. .

[F2(7)An energy conservation authority may prepare a report on houses in multiple occupation or house-boats which is separate from the report on other residential accommodation

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<sup>30</sup> Source: <http://www.legislation.gov.uk/ukpga/1995/10/section/2>



One area in the 15% highest is in Rose Hill:



**APPENDIX 3 - KEY DATA SUMMARY TABLE (FROM DECC)**

<b>Indicator</b>	<b>Unit of measurement</b>	<b>Date</b>	<b>Value</b>
Total carbon emissions	Total, kilotonnes CO2	2010	948.9
	Tonnes per capita (of resident population)	2010	6.2
Industrial & commercial emissions	Total, kilotonnes CO2	2010	536.8
	Tonnes per capita (of resident population)	2010	3.5
	Tonnes per job	2010	5.0
Domestic emissions	Total, kilotonnes CO2	2010	278.5
	Tonnes per capita (of resident population)	2010	1.8
Road transport emissions	Total, kilotonnes CO2	2010	133.6
	Tonnes per capita (of resident population)	2010	0.9
Domestic electricity consumption	Sales per consumer (kWh)	2010	3,990
Domestic gas consumption	Sales per consumer (kWh)	2010	15,045
Non-domestic electricity consumption	Sales per consumer (kWh)	2010	106,878
Non-domestic gas consumption	Sales per consumer (kWh)	2010	620,498
Domestic solar PV installations under FiT	Installations per 10,000 households	June 2012	71
Loft insulations under CERT	Installations per 10,000 households	2011/12	391
Cavity wall insulations under CERT	Installations per 10,000 households	2011/12	287
Households in fuel poverty	Number of households	2010	7,100
	Proportion of households	2010	13%

*Energy Statement for all residential/ student developments (PART A)*

Application reference (if known):                      Site Address:      Description of Proposed Development  
Please use the following prompts to describe the design of your proposal.

**Site Design and Layout**

How does the design take into account the potential for passive solar gain? (e.g. orientating larger windows to face within 30 degrees of south to make the most out of sunlight, avoiding over-shadowing of south elevation of existing buildings?)

How does the design include measures to prevent overheating in summer? (e.g. external shading, natural ventilation, secure ventilation for night cooling, high thermal mass)

**Renewable Energy**

How will the design incorporate the use of low carbon energy or energy from renewable sources on-site?

How is the renewable or low carbon technology employed in keeping with the character and context of the area? (i.e. have renewable technologies been chosen that integrate visually, and take account of any archaeological constraints?)

**Building Regulations**

Have you considered how the scheme will meet the energy performance standards required by Building Regulations? (e.g. large areas of north facing glazing (windows) may make it very difficult to comply with Part L Building Regulations)

Estimated CO2 emissions and CO2 emissions savings from meeting Part L of the Building Regulations

**Building for the Future**

How will the scheme be designed to cope with future climate conditions? (e.g. more storms and flooding, hotter summers, wetter winters, increased risk of soil subsidence)

How will the scheme re-use materials with a reduced energy input? (e.g. re-use of existing on-site materials, recycled materials, or materials listed in the BRE Green Guide27)

How will the development be adaptable in the future in terms of its use and the future incorporation of energy saving technologies?

What further steps are being taken to move towards carbon neutrality?

*Example Energy Statement for qualifying developments (PART B)*

The table below should be used by qualifying developments to demonstrate how energy efficiency measures and renewable or low carbon energy is factored into the development.

In addition to Part A, the following information should be supplied:

Applicants should produce an assessment of the energy demand from proposed major developments, which should demonstrate the expected energy savings from the renewable energy measures incorporated in the development.

**Baseline calculations**

Part L of the Building Regulations will be the baseline standard that all new buildings must meet. Planning policies are not in place to duplicate regulations.

The calculation of baseline energy demand, including energy consumed in the operation of the space heating/ cooling and hot water systems, ventilation, all internal lighting, cooking (regulated emissions) and electrical appliances (unregulated emissions);

**Renewable Energy Technologies**

Development should achieve a minimum reduction of 20% from on-site renewable/ low carbon energy generation (which can include decentralised renewable energy). Where the 20% target is has not been achieved, scheme specific justification is required. Energy statements should therefore set out the on-site renewable or low carbon energy measures specific to the scheme and demonstrate the extent to which they exceed building regulations.

